

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-196952

(43)Date of publication of application : 12.07.2002

(51)Int.Cl.

G06F 11/30  
G06F 13/00

(21)Application number : 2000-397303

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(22)Date of filing : 27.12.2000

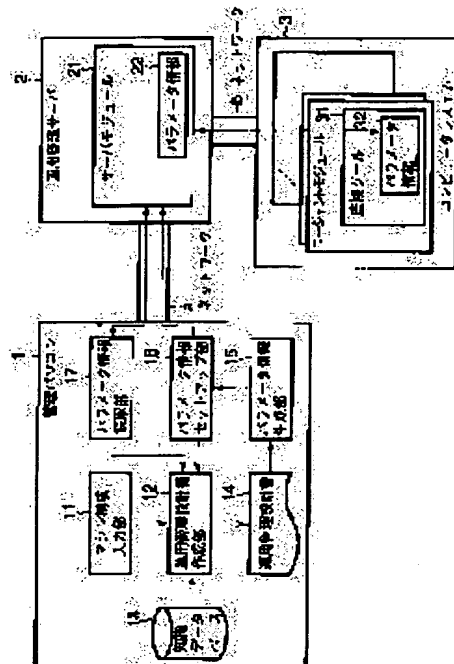
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## (54) OPERATION MANAGEMENT SUPPORT SYSTEM AND OPERATION MANAGEMENT SUPPORT METHOD OF COMPUTER SYSTEM

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an operation management support system capable of forming an operation management design book or the like without requiring a professional knowledge.

**SOLUTION:** First of all, a machine constitution input part 11 inputs the constitution of this computer system 3. An operation management design book formation part 12 forms the operation management design book 14 suitable for the inputted constitution by referring to a knowledge database 13. A parameter information generation part 15 generates parameter information for operating an operation management middleware following the operation management design book 14, and a parameter information setup part 16 generates a macro program for setting up the parameter information in the operation management middleware. In addition, the parameter information setup part 16 transmits the macro program to an operation management server 2, and allows the server to execute the program and to set up the parameter information in the operation management middleware.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

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## Feature 1

### Unfailing Client Management in the Age of Office 2000 IE5.0 SMS 2.0

#### User Support

Problem: Restrict functions of OS and applications and let free users focus on their business

#### Measures:

Restrict user operation by the use of the NT basic functions

When a personal computer is used at companies, not so many applications are used in actual business. For example, for quite a lot of users, it would be sufficient to use only four applications, namely, e-mail software, WWW browser, word processor, and spreadsheet software. There would be users who operate business application software only which a company uniquely developed.

However, to a personal computer, applications other than those needed can be installed and many functions which are not necessary to be used usually are equipped, too. In the event that the client OS is the Windows NT Workstation, general users are unable to change their network settings or add new devices, but they can easily set screensavers or wallpapers from the control panel.

If you want the users to focus just on their business only, users should be prevented from operating the computer more than necessary. In the Windows NT, mechanisms for achieving such purpose are provided. The above-mentioned system policy is one of them. Explanation has already been made on how the data storage place is changed in Office 97, but in the policy template, many items that can restrict basic operations of the OS are readily available, in addition to the changes of application settings.

### Choose and use effective policies

Fig. 12 shows how the control panel operation can be restricted by the use of the standard policy template. In the event that the set user attempts to access the control panel, the control panel displays a message to the effect that the access is restricted. In addition to this, it would be effective to restrict user's imprudent operations by setting the network computer not to be displayed.

In addition, as a solution to provide a user with a restrictive operating environment using the system policy, there is Zero Administration Kit (ZAK) (see the article separately featured on page 93). In the policy template attached to ZAK, some set items are convenient even when they are used individually. Examples include an item to restrict drive display. When this is enabled, the user is unable to access anything other than the home directory.

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NIKKEI Windows NT, June 1999 (no. 27)

The policy is set on the server side and is stored in a predetermined place

The policy set is reflected to the client.

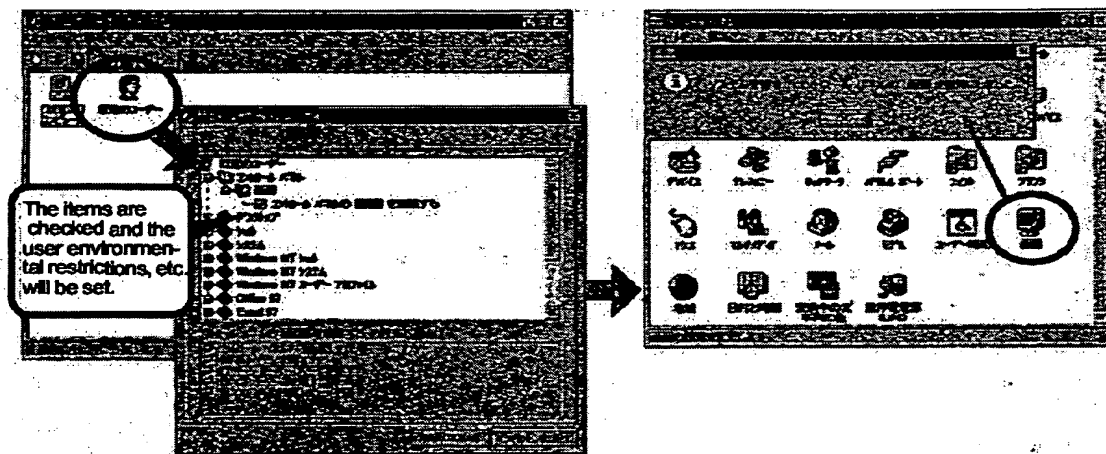


Fig. 12. User operating environment is restricted by the system policy  
The items are explained by easily understandable words. Once the restriction of the control panel is set, a disable message is displayed even if the user tries to operate the control panel.

## IP Information

Lucent Technologies Japan announces network management solution “LightShip™” for public IP service layer

Lucent Technologies Japan recently announced a comprehensive network solution “LightShip” of IP Service.

Lucent Technologies Japan has provided business-quality IP service for network service providers, but with LightShip, the provider is able to introduce a well-developed and advanced next-generation IP service while securing high reliability and high profitability.

### Functions of LightShip based on the directory

In the network management solution to date, there have been adopted systems to record the policy information for each user directly in a switch or a router as part of settings or manage unique policy information for each device.

However, the system of Lucent Technologies is to hold the shared policy information in an external LDAP (Lightweight Directory Access Protocol) server. When the user connects with the network, the IP server switch searches the applicable policy from the designated server.

According to this kind of directory-based system, not only can rapidly increasing policy information be greatly simplified but also the need of locally storing the information is greatly reduced.

In addition, LightShip is featured by the configuration management, service network performance monitoring, trouble control, inventory control, and GUI (Graphical User Interface) to distribute software, etc. Furthermore, in addition to the above LDAP, adopting SNMP (Simple Network Management Protocol) for device monitoring, RADIUS (Remote Authentication Dial-In User Service) for user authentication and accounting, and other most popularized standard technologies in

the industry can be mentioned as its great features.

What is WBSS service?

As another great feature of LightShip, not only the above-mentioned configuration management tool and trouble control tool, but also added value service of the advanced generation called "WBSS" (Web Base Service Selection) is provided. WBSS is based on Extensive Web-based GUI Customize using HTML, and the integration of AAA, policy server and accounting system is able to support both central and distributed architectures. By this architecture technology, the advanced-generation automated added value service is achieved by the retailer and wholesaler models using the Lucent Technologies' "Spring Tide 5000" (photo).

By the use of WBSS, the end user can select services by GUI on the web-base, which enables automatic configuration on the basis of the individual service templates. Because this selection is performed from the user side, the client does not have to wait after the order is placed with the service provider and is able to immediately receive desired services, while the accounting information is outputted to the accounting service.

Published by: Ohmsha, Ltd.

President: Seiji Sato

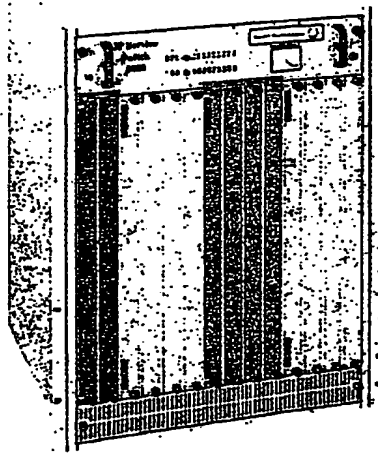
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COMPUTERS & NETWORK LAN 2001.1



SpringTide 5000

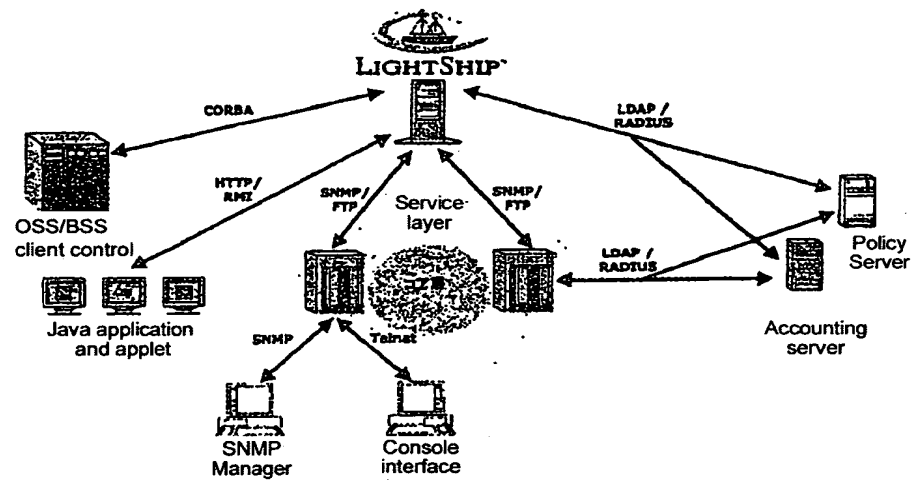


Fig.1. Example of Management architecture by Spring Tide 5000

## Network Management/System Management Tool Useful for TCO Reduction

Integrated management tools that make network operation management more efficient

In the company network, reduction of a ballooning management cost is a challenge, together with stable operation of the system. For the person in charge of a network/information system, efficient system operation is required by uniform management. There are all kinds of operation controls from hardware such as LAN/WAN equipment, server/client, etc., as well as applications, OS, and other software, to user management. Furthermore, management of security, storage, policy, and others become necessary, too.

Various integrated management tools which can increase efficiency in increasingly complicated network operation management have been provided. The tools intend to totally support job management which automates server power ON/OFF and backup processing in addition to monitoring of whole network and system, performance management, component information management, failure management, software distribution and license management, asset management, application management, etc. The integrated management tool develops links with other vendors' products (security, UPS, database, ERP, band controller, etc.) and can flexibly support system expansion.

In order to carry out integrated operation management with various devices coordinated, the management mechanism based on the user policy is essential. In addition, policy management is also required for mission-critical applications such as mission-critical task system, multimedia, and others.

By the QoS control of policy base, it is possible to establish the priority of using the network in accordance with types of applications, users, and units, or to



carry out traffic control of applications which use a large amount of bandwidth. For example, effective utilization of network is made available by QoS control that restricts the Web access in the time zone to process the order receipt/placement data and preferentially transmit mission-critical data or to secure a large band by the audio data in delay-sensitive VoIP, etc.

Examples of the method for achieving the QoS control include IEEE802.1p that performs priority control in the switching network, RSVP (Resource Reservation Protocol), COPS (Common Open Policy Service), etc., in which a router and an application cooperate to secure the band. COPS operates on TCP and is a protocol in which the policy server sets QoS to the LAN switch, router, and other network equipment in order to set security and other policy information. It is a system in which the policy server, to which a band securing request is sent from the network equipment side, secures the band in accordance with the network conditions and access authority.

Policy server that automatically distributes policy setting information

To date, policy setting must have been carried out for each device such as a LAN switch and router on the network. Though the policy was effective, loads to the controller resulting from policy setting and change were not small.

Recently, various policy servers which can automatically reflect the policy setting information to devices on the network are provided. QoS as to which application is preferentially transmitted and security can be set and managed in an integrated fashion, and TCO reduction can be enabled.

For distributing the setting information to each device, LDAP (Lightweight Directory Access Protocol), which is the industrial standard of directory service, etc. are used. The directory service centrally manages resources such as devices, applications, users, etc. on the network by the database. This enables DNS/DHCR server, etc. which dynamically assign QoS control that meets

applications, virtual LAN configuration management, user ID, IP address, and other various kinds of information on the network are controlled by the directory, and the setting information is transmitted to devices via the policy server. By the cooperation between the policy server and the directory service, the policy can be easily reflected to each device on the network.

The directory service has advantages such as single sign-on, etc. which allows the user to access the allowed resource by one login.

Nihon PeerLogic, K.K. provides directory service products. The Company provides "LiveContent DIRECTORY (i500)" which are based on the industry-standard X.500, X.509, and LDAP and can be used in a wide variety of applications such as EXTRANET, VPN, PKI, access control, etc., the middle ware "LiveContent BROKER," which conforms to CORBA, and other product groups. They support creation of a portable application that integrates sales, marketing, and service.

Increased efficiency in inventory management and PC management by automatic distribution of software

There are a quite a lot of inventory management which achieves increased efficiency in client PC management and management tools which support automatic software distribution and reduce TCO. The inventory management controls types of CPUs of personal computers, hard disk and memory capacity, interface card and other hardware information, as well as software information such as installed OS, applications, etc., and make good use of them for resource management, license management, software distribution, etc.

By compiling a database of these pieces of information, for example, when software is upgraded, it is possible to quickly grasp the applicable personal computer. Many product conform to DMI (Desktop Management Interface) which is API (Application Programming Interface) for transferring information between the

control tool and hardware/software of personal computers to be controlled.

Automatic distribution of software is to designate target personal computers at the time of upgrading and automatically install the software. A function to distribute software at the designated time in the midnight or holidays, etc. after completion of working days, a function to automatically generate script for installing software, and a function to automatically detect errors at the time of installation and return them to their original state are equipped.

UPS (uninterrupted power supply) that enables centralized power supply control

UPS which carries out power supply control of servers and network devices is essential for the corporate network. Servers and network devices are protected not only at the time of the power failure but also at the time of various power supply troubles including thunderbolt, surge, voltage drop, or overvoltage. UPS stably supplies power throughout the whole system and plays a role to prevent missing of data which is the corporate management resources.

In addition, there are many cases in which batch processing is carried out in the nighttime between the server at the remote site and mission-critical task server at the main office, or updating server programs in a holiday. It is possible to automatically start the server at each site by the use of UPS or to automatically shut down the server after the completion of operation.

“Smart-UPS” of UPS of APC Japan has features of sine wave output that secures compatibility with all loads, self-test that increases reliability, line-interactive system, etc. Furthermore, with the power source control software incorporated, automatic shutdown of the system and data storage, automatic reboot, and other functions are provided. Troubles required for system operation management are reduced, such as enabling ON-OFF of the server power supply via Web browser or SNMP.

In addition, in the CTC technology, UPS that can support small-scale to large-scale networks is provided, such as AC-power supply type “CTC Power Station Series” and DC power supply type “CTCharger Series,” etc. In addition to its superb redundancy and extensibility, by swappable maintenance, etc., stable system operation is supported.

#### Support from network management to system management

With an advance of the distribution network, a network is introduced even to a small-scale site where an administrator is difficult to be allocated, and loads on the corporate network/system administrator are increasing. It is also indispensable to master expert knowledge that supports advancing IT, such as introducing still higher speed IP network and security measures using VPN, etc.

On the other hand, quite a lot of companies face a difficulty to secure human resources who have expert knowledge on the network system. In a company lacking in full-time administrators, management of the network and information system is entrusted to employees who are well-acquainted with IT. When the management is entrusted to a specific employee, there is no person who has a thorough knowledge of the network system in the company in the event that the employee leaves the company, and there occur cases in which unexpected troubles are unable to be coped with.

Furthermore, companies which operate the EC system, etc. by themselves may experience business paralysis once the network system is shuts down, and companies which cannot carry out 24-hour, 365-day operation management in their companies have to depend on external specialists.

To date, there have been not a few cases in which network operation management is outsourced to external specialists due to shortage of administrators. However, recently, companies who positively utilize outsourcing services have increased for stable operation of the network system, the lifeline of business, and for

TCO reduction.

Various kinds of convenient services that allow for outsourcing network management and system operation management with increasing complexity are provided. There are not a few businesses which comprehensively support companies from consulting of network formulation and design, introduction, operation and maintenance, even to a help desk. By outsourcing the operation management services to outside professionals, the in-house person in charge of network management is able to concentrate on the services such as planning and development of network and information systems, which are original services of administrators.

For example, UNIADEX provides a high-added value service system "Customer Plus" that covers network management to system management. "Customer Plus" consists of solution service that supports operations from network planning and formulation to desktop and operation management, and support service that performs operations related to maintenance of the enterprise server system and client/server system. This could be said the service which contributes to reduction of the system management cost in addition to stable operation of the corporate user's networks.

It is the KVM Matrix type Switch "MasterConsole MX" of Raritan Computer Japan, Inc. that exhibits effects on TCO by reducing the cost and space required for extension and installation of KVM (keyboard, video monitor, and mouse). Maximum 1024 personal computers remotely located are central-controlled by one set (maximum four sets) of KVM and remote control from the center can be conducted. It is reported that "Master Console MX" offers a wide variety of applications including the use at the server firms and data centers, hardware and software development tests, system integrations, and others.

As described above, a wide array of management tools and services that

increase efficiency of network management and system management are provided,  
and corporate users have a greater choice of TCO reduction.

NIKKEI SYSTEMS PROVIDER 2000.5.26

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